

ABSTRACT OF THE INVENTION

An x-ray emitting system and method for administering a predetermined x-ray dose rate are provided. The system includes an x-ray emitter, a controller operably connected to the x-ray emitter, a current sensor operably connected to the controller, and a voltage sensor operably connected to the controller. The controller determines an actual dose rate based on a received current sensor signal and a received voltage sensor signal and adjusts a supplied voltage to allow the actual dose rate to match a predetermined dose rate. The method of operating a device for emitting x-rays includes: applying a voltage from a voltage source to the device, measuring current and voltage within the device, determining an actual dose rate based on the measured current and voltage, comparing a desired dose rate to the actual dose rate, adjusting the applied voltage, and matching the actual dose rate to the desired dose rate.

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